

WHAT IS CLAIMED IS:

1 1. A duct seal system comprising:

2 a supply tank attached to and supplying liquid liner material to a supply

3 pump, a supply line for supplying liquid liner material to a spray device,

4 said supply line attached on one end to said supply pump and removably

5 attached on an opposite end to a spray device so that the supply line can

6 be fed through an air conditioning duct before or after the spray device is

7 attached to the supply line, a pulling device engaging the supply line in

8 order to pull the supply line and attached spray device through the duct as

9 the spray device sprays liquid liner material on the interior surfaces of the

10 duct.

1 2. A duct seal system according to Claim 1 further comprising:

2 a computer connected to said supply pump and said pulling device as a

3 means of controlling the spray of liquid liner material applied by the spray

4 device to the interior surfaces of the duct as the spray device is pulled

5 through the duct by the pulling device.

1 3. A duct seal system according to Claim 1 wherein the spray device

2 further comprises:

3 at least two sets of wheels that are retractably biased outward so that they
4 engage the interior surfaces of the duct on at least three different sides of
5 the duct to hold a spray head provided on the spray device approximately
6 in the center of the duct and allow the spray head to be pulled through the
7 various turns provided in the duct.

1 4. A duct seal system according to Claim 3 further comprising:

2 said spray head provided with nozzles that rotate relative to the spray
3 head as the nozzles spray the liquid liner material onto the interior
4 surfaces of the duct.

1 5. A duct seal system according to Claim 1 further comprising:

2 an electrostatic unit attached by one lead to the duct and attached by
3 another lead to the spray device so that opposite electrical charges are
4 applied to the duct and spray device by the electrostatic unit as a means
5 of aiding in the application on the liquid liner material by the spray device.

1 6. A duct seal system according to Claim 5 wherein the electrostatic
2 unit, the supply pump and the supply tank are each mounted on a service
3 vehicle.

1 7. A duct seal system according to Claim 1 wherein the liquid liner
2 material is polyurethane.

1 8. A duct seal system for applying liquid liner material to the interior
2 surfaces of an air duct comprising the following steps:

3 a. inserting a first end of a supply line through a first opening in an air
4 duct that is to be lined so that the first end of the supply line exits the duct
5 at a second opening that is provided in the duct,

6 b. attaching a spray device to the first end of the supply line while an
7 opposite second end of the supply line remains attached to a supply pump
8 and supply tank that are designed to supply liquid liner material through
9 the supply line to the spray device, and

10 c. initiating flow of liquid liner material to the spray device via the
11 supply line simultaneous with initiating a pulling force on the supply line
12 and the attached spray device so that the spray device deposits liquid liner

13 material onto the interior surfaces of the duct continuously between the
14 first and second openings as it is pulled through the duct.

1 9. A duct seal system according to Claim 8 further comprising the
2 following steps that occur before steps c:

3 d. attaching one lead of an electrostatic unit to the duct and attaching
4 a second lead of the electrostatic unit to the spray device, and

5 e. activating the electrostatic unit so that the electrostatic unit provides
6 the duct with an electrical charge that is opposite to the electrical charge
7 that the electrostatic unit provides to the spray device.

1 10. A duct seal system according to Claim 9 further comprising the
2 following step that occurs after step c:

3 f. allowing the liquid liner material to cure on the interior surfaces of
4 the duct.

1 11. A duct seal system according to Claim 8 wherein the initiating of
2 flow of liquid liner material to the spray device and the initiating of a pulling
3 force on the supply line are both computer controlled so that the liner

4 material is deposited in an even manner to the interior surfaces of the
5 duct.

1 12. A duct seal system for applying liquid liner material to the interior
2 surfaces of an air duct comprising the following steps:

3 a. attaching a spray device to a first end of a supply line while an
4 opposite second end of the supply line remains attached to a supply pump
5 and supply tank that are designed to supply liquid liner material through
6 the supply line to the spray device,

7 b. inserting the spray device and the first end of a supply line through
8 a first opening in an air duct that is to be lined so that the spray device and
9 first end of the supply line reach a desired stopping point in the duct, and

10 c. initiating flow of liquid liner material to the spray device via the
11 supply line simultaneous with initiating a pulling force on the supply line
12 and the attached spray device so that the spray device deposits liquid liner
13 material onto the interior surfaces of the duct continuously between the
14 desired stopping point and the first opening of the duct as it is pulled
15 through the duct.

1 13. A duct seal system according to Claim 12 further comprising the
2 following steps that occur before step c:

3 d. attaching one lead of an electrostatic unit to the duct and attaching
4 a second lead of the electrostatic unit to the spray device, and

5 e. activating the electrostatic unit so that the electrostatic unit provides
6 the duct with an electrical charge that is opposite to the electrical charge
7 that the electrostatic unit provides to the spray device.

1 14. A duct seal system according to Claim 13 further comprising the
2 following step that occurs after step c:

3 f. allowing the liquid liner material to cure on the interior surfaces of
4 the duct.

1 15. A duct seal system according to Claim 12 wherein the initiating of
2 flow of liquid liner material to the spray device and the initiating of a pulling
3 force on the supply line are both computer controlled so that the liner
4 material is deposited in an even manner to the interior surfaces of the
5 duct.